

**Claims**

1. A water-borne emulsion polymer comprising as copolymerized units the following monomers:

- (A) an ethylenically unsaturated monomer containing at least one amino group;
- (B) an ethylenically unsaturated monomer containing no amino group;
- (C) optionally a hydroxy- or alkoxyalkyl(meth)acrylate of the formula  

$$\text{CH}_2=\text{CH}(\text{R}^1)-\text{COO}-\text{C}_t\text{H}_{2t}-\text{OR}^2$$
 wherein  $\text{R}^1$  is hydrogen or methyl and  $\text{R}^2$  is hydrogen or  $\text{C}_1$ - $\text{C}_6$ alkyl and  $t$  is an integer of 2, 3, 4, 5 or 6;
- (D) a (poly)alkyleneglycolmono(meth)acrylate of the formula  

$$\text{CH}_2=\text{CH}(\text{R}^1)-\text{COO}-(\text{C}_m\text{H}_{2m}\text{O})_n-\text{OR}^2$$
 wherein  $\text{R}^1$  is hydrogen or methyl and  $\text{R}^2$  is hydrogen or  $\text{C}_1$ - $\text{C}_6$ alkyl and  $m$  is an integer of 2 or 3 and  $n$  is an integer of 2 to 30.

2. An emulsion polymer according to claim 1, wherein monomer (A) is an amino(meth)acrylate, a vinylpyridine or a vinylimidazole.

3. An emulsion polymer according to claim 1 or 2, wherein monomer (A) is dimethylaminoethylmethacrylate, monomer (B) is styrene, monomer (C) is hydroxyethylmethacrylate and monomer (D) is methoxypolyethyleneglycol methacrylate.

4. An emulsion polymer according to any one of claims 1- 3 comprising in addition another dispersant and/or a common additive.

5. The use of the emulsion polymer according to claim 1 as dispersing agent in aqueous systems.

6. The use of the emulsion polymer according to claim 1 as dispersant for organic and/or inorganic pigments in an aqueous medium; for water-borne decorative paints or water-borne coatings or to produce Resin Free Pigment Concentrates (RFPC) for ultra low VOC coatings.

7. A pigment dispersion comprising at least one organic and/or inorganic pigment; water and/or a mixture of water and a water miscible solvent and an emulsion polymer according to claim 1.

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8. A process for preparing a water-borne emulsion polymer as defined in claim 1, which process comprises the steps of:

- (i) mixing the monomers (A), (B), (C), (D) and an initiator (E); or mixing the monomers (A), (B), (C), (D), water and an initiator (E) to establish a premix;
- (ii) adding the premix into water containing an initiator (E),
- (iii) polymerizing the premix to the emulsion polymer.

9. A process for preparing a water-borne emulsion polymer as defined in claim 1, which process comprises the steps of

- (i) mixing the monomers (A), (B), (C), (D), water, an initiator (E) and a surfactant (F) to establish a premix;
- (ii) adding the premix into water containing an initiator (E) and a surfactant (F),
- (iii) polymerizing the premix to the emulsion polymer; or the steps of
  - i) mixing the monomers (A), (B), (C), (D), water, an initiator (E), a surfactant (F) and a chain transfer agent (G) to establish a premix;
  - (ii) adding the premix into water containing an initiator (E) and a surfactant (F)
  - (iii) polymerizing the premix to the emulsion polymer.

10. A water-borne emulsion polymer obtainable by a process according to claim 9 or 10.